

## CLAIMS

1. A multilayer wiring board comprising:

5 a core portion including a core insulating layer containing a carbon fiber material;

a first lamination wiring portion bonded to the core portion and having a laminated structure including at least a first insulating layer and a first wiring pattern, the first insulating layer containing glass cloth; and

10 a second lamination wiring portion bonded to the first lamination wiring portion and having a laminated structure including at least a second insulating layer and a second wiring pattern;

15 wherein the core portion, the first lamination wiring portion and the second lamination wiring portion are arranged in a stack.

2. A multilayer wiring board comprising:

20 a core portion including a core insulating layer containing a carbon fiber material;

two first lamination wiring portions respectively bonded to opposite sides of the core portion, each of the first lamination wiring portions having a laminated structure including at least a first insulating layer and  
25 a first wiring pattern, the first insulating layer containing glass cloth; and

a second lamination wiring portion bonded to one of the first lamination wiring portions and having a

laminated structure including at least a second insulating layer and a second wiring pattern;

wherein the core portion, the first lamination wiring portions and the second lamination wiring portion  
5 are arranged in a stack.

3. The multilayer wiring board according to Claim 2, further comprising an additional second lamination wiring portion, wherein the additional second lamination  
10 wiring portion has a laminated structure including at least a second insulating layer and a second wiring pattern, and is bonded to the first lamination wiring portion other than said one of the first lamination wiring portions.

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4. The multilayer wiring board according to Claim 1, further comprising a through-hole via extending through both the core portion and the first lamination wiring portion, wherein the through-hole via is insulated from  
20 the core portion by an insulating layer surrounding the through-hole via.

5. The multilayer wiring board according to Claim 1, wherein the core insulating layer, the first insulating  
25 layer and the second insulating layer have respective thermal expansion coefficients defined in a surface-spreading direction transverse to a stacking direction of these three layers, the thermal expansion coefficient

of the core insulating layer being no smaller than -3 ppm/K but smaller than 8 ppm/K below 150°C, the thermal expansion coefficient of the first insulating layer being no smaller than 8 ppm/K but smaller than 20 ppm/K below  
5 150°C, the thermal expansion coefficient of the second insulating layer being no smaller than 20 ppm/K but smaller than 100 ppm/K below 150°C.

6. The multilayer wiring board according to Claim 1,  
10 wherein the carbon fiber material is provided in a form of mesh, cloth or nonwoven fabric.

7. The multilayer wiring board according to Claim 1,  
wherein the core insulating layer contains the carbon  
15 fiber material at a rate of 30 through 80 vol%.

8. The multilayer wiring board according to Claim 1,  
wherein the carbon fiber material is graphitized at a rate  
not smaller than 99%.

20 9. The multilayer wiring board according to Claim 1,  
wherein the core insulating layer is formed of a material containing a resin that is selected from a group consisting of: polysulfone, polyethersulfone,  
25 polyphenylsulfone, polyphthalamide, polyamideimide, polyketone, polyacetal, polyimide, polycarbonate, modified-polyphenyleneether, polyphenyleneoxide, polybutyreneterephthalate, polyacrylate,

polyphenylenesulfide, polyetheretherketone,  
tetrafluoroethylene, epoxy, cyanateester, and  
bismaleimide.